

Opposing Views

Attachment #8

The Natural Resources in the Forest Benefit from Fire

The 46 statements below present scientific information showing fires far from the WUI benefits the natural resources in the forest and should not all be suppressed. Indeed, the USFS tells the public that fire must be reintroduced into the forested ecosystem because fires are Nature's way of restoring the forest.

The titles of literature authored by and supported by USDA employees are highlighted in red.

Wildfire benefits Opposing View - "Recently burned areas represent an important type of habitat that many species of animals have evolved to utilize. Snags (standing dead trees) provide critical nesting and foraging habitat for birds and small mammals, and as they decay and fall, create additional habitat for small mammals and terrestrial amphibians as coarse woody debris."

Campbell, John L. Ph.D, Dan C. Donato, Joe B. Fontaine J. Boone Kauffman Ph.D., Beverly E. Law Ph.D., and Doug Robinson

"**Biscuit Fire Study**." Oregon State University Department of Forest Science

Terrestrial Ecosystem Research and Regional Analysis. 2003.

<http://terraweb.forestry.oregonstate.edu/biscuit-fire-study>

FS Response: This is a summary of a study with statements supporting the need for the study. It mentions the value of recently burned forest, and importance of dead trees (standing and dead). Post-fire habitats do provide habitat for a suite of species. It has long been recognized that snags and downed logs have value for wildlife. See EA at 3-17 for discussion on dead wood.

Wildfire benefits Opposing View - “Yellowstone is a ‘fire-adapted ecosystem,’ which means wildfire helps maintain the health of the area’s wildlife and vegetation. Most park fires are caused by lightning and, whenever possible, monitored and managed, but not necessarily extinguished.”

Chronicle Staff, “**Yellowstone fires have potential to grow much larger**”
BozemanDailyChronicle.com, September 24, 2009
<http://bozemandailychronicle.com/articles/2009/09/25/news/70fires.txt>

FS Response: This is an article about fires in Yellowstone in 2009. Not relevant, not scientific report.

Wildfire benefits Opposing View - “Finally, as mentioned above, wildfires can also generate benefits. Many plants regrow quickly following wildfires, because fire converts organic matter to available mineral nutrients. Some plant species, such as aspen and especially many native perennial grasses, also regrow from root systems that are rarely damaged by wildfire. Other plant species, such as lodgepole pine and jack pine, have evolved to depend on stand replacement fires for their regeneration; fire is required to open their cones and spread their seeds. One author identified research reporting various significant ecosystems threatened by fire exclusion — including aspen, whitebark pine, and Ponderosa pine (western montane ecosystems), longleaf pine, pitch pine, and oak savannah (southern and eastern ecosystems), and the tallgrass prairie. [57] Other researchers found that, of the 146 rare, threatened, or endangered plants in the coterminous 48 states for which there is conclusive information on fire effects, 135 species (92%) benefit from fire or are found in fire-adapted ecosystems.” [58]

“Animals, as well as plants, can benefit from fire. Some individual animals may be killed, especially by catastrophic fires, but populations and communities are rarely threatened. Many species are attracted to burned areas following fires — some even during or immediately after the fire. Species can be attracted by the newly available minerals or the reduced vegetation allowing them to see and catch prey. Others are attracted in the weeks to months (even a few years) following, to the new plant growth (including fresh and available seeds and berries), for insects and other prey, or for habitat (e.g., snags for woodpeckers and other cavity nesters). A few may be highly dependent on fire; the endangered Kirtland’s warbler, for example, only nests under young jack pine that was regenerated by fire, because only fire-regenerated jack pine stands are dense enough to protect the nestlings from predators.”

Congressional Research Service Report
“**Forest Fire/Wildfire Protection**”
February 14, 2005
http://www.coloradofirecamp.com/congressional_research/forest-fire-wildfire-effects.htm

FS Response: CRS report for Congress. Report contains a general discussion of wildfire effects and discusses in depth fire return intervals and the role of fire on the landscape. Not specific to this project.

Wildfire benefits Opposing View - “Forested landscapes may be thought of as living “crazy quilts,” with patches formed occasionally through the action of natural and human-caused disturbances like fire, windstorms, and logging. Prior to the advent of modern logging technology, virtually every North American forest experienced occasional renewal through the action of fire. In some places, fire was a frequent visitor, killing very few large trees as it burned harmlessly through the forest litter and grass. In most places, though, fire burned only occasionally, creating patches of severely burned forest as it raced through the canopy under extreme weather conditions. In these patches, old forests were killed, soon to be replaced by young, rejuvenated stands. This cycle of forest maturation, death, and replacement was critical to maintaining the diversity and vitality of the ecosystem.”

“Dead Trees and Healthy Forests : Is Fire Always Bad?”

The Wilderness Society, March 2003

Online link not available anymore

FS Response: This article is not from a peer reviewed scientific publication and represents a position statement for the Wilderness Society as such, it does not warrant a detailed response.

Wildfire benefits Opposing View - “Trees killed by wildfire and left standing take on roles that change the ecological services they previously provided as components of a green-tree system. They still offer some shade, which in a burned environment can slow the heating of surface waters and the soil surface. They may also provide more rapid recruitment of large wood into streams. Decomposing fallen trees provide nutrients, shelter, and early structure for a rejuvenating forest floor.”

“Burned forests typically support significantly different bird communities, with many species dependent on stand-replacement fires to maintain their populations across the landscape. Usually there’s an increase in cavity-nesting, insectivorous birds such as woodpeckers and certain species of flycatchers.”

Postfire Logging: Is it Beneficial to a Forest?

Duncan, Sally Ph.D.

USDA Forest Service. *PNW Science Findings* issue 47. October 2002.

<http://www.fs.fed.us/pnw/science/scifi47.pdf>

FS Response: Relevant article. This project has an extensive list (Appendix A) of project design criteria that would reduce or eliminate those effects outlined in the article. Additionally, the proposed action focuses on areas in matrix land allocations (suitable for timber harvest) (approximately 25,386 matrix acres within the project area) and further refined to only those acres which endured approximately 50-100 percent basal area loss. Further analysis refined the proposed action acres to 4,090 by "*removing units lacking economically viable products, logging systems operability and accessibility, locating and avoiding unmapped riparian reserves, and considerations for post-fire wildlife habitat and other resources.*" (EA at 1-1) The proposed action could potentially affect about 16% of the matrix lands within the project boundary, and could affect 30% of the matrix lands that fell into the 50-100 percent basal area loss. On a larger scale, the proposed action would affect only 2% within the fire perimeter that overlaps with Forest Service land.

Wildfire benefits Opposing View - "Since those early days, millions of dollars have been spent on campaigns to prevent forest fires. But researchers now know that fire is not necessarily bad. It can be a natural part of a healthy grassland or forest ecosystem.

Fire reduces the buildup of dead and decaying leaves, logs and needles that accumulate on the forest floor. It reduces or eliminates the overhead forest canopy, increasing the sunlight that stimulates new growth from seeds and roots.

Many plants and animals have adapted to fire.

Both lodgepole pine and jack pine have resin-sealed cones that stay on trees for many years. The heat of fire melts the resin and the cones pop open. Thousands of seeds then scatter to the ground and grow into new stands of pine.

Woodpeckers feast on bark beetles and other insects that colonize in newly burned trees.

And so, 20 years ago, Parks Canada decided that it wouldn't interfere in natural processes such as fire, insects and disease unless it had to — that is, unless people or neighbouring lands were threatened."

"Fighting fire in the forest"

CBC News, June 17, 2009

<http://www.cbc.ca/news/canada/fighting-fire-in-the-forest-1.863449>

FS Response: This article is not from a peer reviewed scientific publication and represents a position statement for Canadian forests and their process for determining whether to initial attack a fire or not. This is a Forest Service policy issue and outside the scope of the project proposed action or decision; therefore, it does not warrant a detailed response.

Wildfire benefits Opposing View - "Wildfires are a natural occurrence and serve important ecosystem functions. Forest landscapes are dynamic and change in response to variations in climate and to disturbances from natural sources, such as fires caused by lightning strikes. Many tree species have evolved to take advantage of fire, and periodic burns can contribute to overall forest health. Fires typically move through burning lower branches and clearing dead wood from the forest floor which kick-starts regeneration by providing ideal growing conditions. It also improves floor habitat for many species that prefer relatively open spaces."

"Forest Fires"

The Environmental Literacy Council, 2008

<http://www.enviroliteracy.org/article.php/46.html>

FS Response: This article is not from a peer reviewed scientific publication and represents a position statement for the Environmental Literacy Council, as such it does not warrant a detailed response.

Wildfire benefits Opposing View - "Natural forest disturbances, including fire, kill trees but remove very little of the total organic matter. Combustion rarely consumes more than 10 to 15 percent of the organic matter, even in stand-replacement fires, and often much less. Consequently, much of the forest remains in the form of live trees, standing dead trees, and logs on the ground. Also, many plants and animals typically survive such disturbances. This includes living trees, individually and in patches."

"These surviving elements are biological legacies passed from the pre-disturbance ecosystem to the regenerating ecosystem that comes after. Biological legacies are crucial for ecological recovery. They may serve as lifeboats for many species, provide seed and other inocula, and enrich the structure of the regenerated forest. Large old trees, snags, and logs are critical wildlife habitat and, once removed, take a very long time to replace."

"In addition to effects on postfire wildlife habitat, there are also effects of salvage logging on soils, sediments, water quality, and aquatic organisms. Significant scientific information exists on this topic as well as on biological legacies."

Forging a Science-Based National Forest Fire Policy

Franklin, Jerry F. Ph.D. and James K. Agee Ph.D.

Issues in Science and Technology Fall 2003

<http://issues.org/20-1/franklin/>

Forest Fire/Wildfire Protection

from a CRS report for Congress, January 18, 2006

FS Response: We agree that there are ecological benefits from fire in the ecosystem. The Kirkland's warbler nesting habitat is found around the Great Lakes in Minnesota and as such, would not apply to the project area.

Wildfire benefits Opposing View - “Ecologists and fire experts unanimously agree that fire has served an essential role in certain ecosystems for millennia. The ecological benefits of fire include: the creation of critical wildlife habitat in standing dead trees,

increased nutrients and productivity in soil systems when burned material decomposes, improved conditions for surviving old growth trees when a surface fire moves through a system, and the regeneration of some fire dependent trees like lodgepole pine (*Pinus contorta*). Fire also increases availability of other fundamental building blocks of ecosystems such as moisture and sunshine by opening up the canopy and returning nutrients to the soil. Natural fire cycles maintain the diversity of habitats available to all the species in the ecosystem, from wildlife to wildflowers to fungi.”

Wildland Fire Use: An Essential Fire Management Tool

Gregory, Lisa Dale Ph.D.

A Wilderness Society Policy and Science Brief, December 2004

Online link not available anymore

FS Response: This paper discusses wildland fire use policy and the benefits of wildland fire use. Wildland fire use is a policy issue and outside of the scope of the project.

Wildfire benefits Opposing View - “There is no such thing as "catastrophic wildfire" in our forests, ecologically speaking. That is the central conclusion of a report released this week by the John Muir Project (JMP), a non-profit forest research and conservation organization. The report, "The Myth of Catastrophic Wildfire: A New Ecological Paradigm of Forest Health", is a comprehensive synthesis of the scientific evidence regarding wildland fire and its relationship to biodiversity and climate change in western U.S. forests. It stands many previously held assumptions on their heads, including the assumptions that forest fires burn mostly at high intensity (where most trees are killed), and that fires are getting more intense, as well as the assumption that high-intensity fire areas are ecologically damaged or harmed. The report finds that the scientific evidence contradicts these popular notions.”

New Report Debunks Myth of ‘Catastrophic Wildfire

Matthew Koehler

Published by New West, February 3, 2010

https://newwest.net/topic/article/new_report_debunks_myth_of_catastrophic_wildfire/C564/L564/

FS Response: See the EA for a discussion of fire intensity. See also above response regarding the scale of the treatment in relation to fire perimeter.

Wildfire benefits Opposing View - “As summer wildfire season begins in earnest throughout much of the West, it's important for the public and policymakers to recognize the important role that severely burned forests play in maintaining wildlife populations and healthy forests. Severely burned forests are neither "destroyed" nor "lifeless.”

From my perspective as an ecologist, I have become aware of one of nature's best-kept secrets - there are some plant and animal species that one is hard-pressed to see anywhere outside a severely burned forest."

"An appreciation of the biological uniqueness of severely burned forests is important because if we value and want to maintain the full variety of organisms with which we share this Earth, we must begin to recognize the healthy nature of severely burned forests. We must also begin to recognize that those are the very forests targeted for postfire logging activity. Unfortunately, postfire logging removes the very element - dense stands of dead trees - upon which many fire-dependent species depend for nest sites and food resources."

The Ecology of Severely Burned Forests

Hutto, Richard L. Ph.D.

Counterpunch, July 19 / 20, 2008

<https://www.counterpunch.org/2008/07/19/the-ecology-of-severely-burned-forests/>

FS Response: See the EA for a discussion of fire intensity. See also above response regarding the scale of the treatment in relation to fire perimeter.

Wildfire benefits Opposing View - "Trees in a burned landscape, both dead and alive, continue to provide homes for wildlife after a fire and form the building blocks of new forests."

Nature doesn't Benefit from Logging Fire-Damaged Lands

Karr, James R. Ph.D.

Op-Ed *Tacoma News Tribune*. December 8, 2005.

Online link not available anymore

FS Response: No response required, no link provided.

Wildfire benefits Opposing View - "For Pyne and many others who study wildfires, the conventional understanding of firefighting has led us to the misguided conclusion that this is a struggle we can win. In much of the West, fire is an ordinary part of the landscape, a feature as essential to many ecosystems as rivers and grasses. Periodic fires are nothing more than regular disturbances; it is us who have made them into disasters."

Mission Impossible

Mark, Jason

Earth Island Journal, winter 2009

http://www.earthisland.org/journal/index.php/eij/article/mission_impossible/

FS Response: Article regarding fire suppression. Not relevant to the project.

Wildfire benefits Opposing View - "Fire releases nutrients and uncovers bare soil.

The blackened, bare soil warms quickly, which stimulates soil microbial activity, nutrient cycling, and plant growth. In forests, fire opens up part of the canopy to sunlight, which allows sun-loving plant species to recolonize the site."

"Following fires, plant communities go through successional changes. Many native wildlife species and popular game species, such as bobwhite quail, white-tailed deer, and wild turkey, are dependent on periodic fire to create and maintain suitable habitat. Surface fires can stimulate the growth of herbaceous foods for deer, elk, moose, and hares, and can enhance berry production for black bears and other wildlife. Small mammal populations generally increase in response to new vegetation growth, providing a food source for carnivores. Fire can also reduce internal and external parasites on wildlife." (pg. 2)

"natural disturbance such as fires, floods, and herbivory are critical in maintaining valuable ecosystem functions and creating and restoring wildlife habitat." (pg. 7)

Fish and Wildlife Habitat Management Leaflet number 37

Marks, Raissa, Wildlife Habitat Council

Published by the Natural Resources Conservation Service, USDA, April 2006

https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_022312.pdf

FS Response: Link not available. The above excerpts all are not in dispute for this project. Additionally, the proposed action focuses on areas in matrix land allocations (suitable for timber harvest) (approximately 25,386 matrix acres within the project area) and further refined to only those acres which endured approximately 50-100 percent basal area loss. Further analysis refined the proposed action acres to 4,090 by "*removing units lacking economically viable products, logging systems operability and accessibility, locating and avoiding unmapped riparian reserves, and considerations for post-fire wildlife habitat and other resources.*" (EA at 1-1) The proposed action could potentially affect about 16% of the matrix lands within the project boundary, and could affect 30% of the matrix lands that fell into the 50-100 percent basal area loss. On a larger scale, the proposed action would affect only 2% within the fire perimeter that overlaps with Forest Service land.

Wildfire benefits Opposing View - "During recent decades, ecologists have learned that forest fires were a pervasive phenomenon in practically all forests of the world, even the rainforests. Humans have severely disrupted the natural pattern of fire across the landscape, especially during the last 100 years. Therefore, if forests are to be returned to their more 'natural' state, fire will have to be reintroduced."

Applications of Tree-Ring Dating"

Martinez, Lori

Laboratory of Tree-Ring Research at the University of Arizona

February, 2000

<http://www.ltrr.arizona.edu/lorim/apps.html>

FS Response: This document uses a study of tree rings to explore the effects of fire on tree growth. We agree that there are ecological benefits from fire in the ecosystem. Fire was certainly reintroduced on that landscape.

Wildfire benefits Opposing View - "Contrary to what you may think, a forest fire does not reduce everything to a lifeless ash. Instead, it leaves behind a landscape of blackened trees interspersed with remnants of green, intact forest. Post-fire specialists such as wood-boring insects quickly colonize the dead trees (snags), attracting an array of woodpeckers."

"Identifying the ecological value of a post-fire structure and the characteristics that make it attractive to wildlife is important."

Snag use by foraging black-backed woodpeckers (*Picoides arcticus*) in a recently burned eastern boreal forest."

Nappi, Antoine Ph.D., Pierre Drapeau Ph.D., Jean-François Giroux Ph.D. and Jean-Pierre Savard Ph.D.

Research Gate, April, 2003.

https://www.researchgate.net/publication/271695570_Snag_Use_by_Foraging_Black-Backed_Woodpeckers_Picoides_arcticus_in_a_Recently_Burned_Eastern_Boreal_Forest

FS Response: This article was not available. Salvage harvest activity would take place on approximately 2% in the fire perimeter on Forest Service land, leaving areas for blacked backed woodpeckers to forage.

Wildfire benefits Opposing View - "Trees that survive the fire for even a short period of time are critical as seed sources and as habitat that will sustain many elements of biodiversity both above and below ground. The dead wood, including large snags and logs, is second only to live trees in overall ecological importance."

Ecological Science Relevant to Management Policies for Fire-prone Forests of the Western United States

Noss, Reed F. Ph.D., Jerry F. Franklin Ph.D., William Baker, Ph.D., Tania Schoennagel, Ph.D., and Peter B. Moyle, Ph.D.

Northern Rockies Fire Science Network, 2006

<http://nrfirescience.org/resource/11190>

FS Response: This article was not available. Salvage harvest activity would take place on approximately 2% in the fire perimeter on Forest Service land, leaving areas where dead wood and large snags would be not affected.

Wildfire benefits Opposing View - "Disturbances, from windthrown trees to fires, are natural in forests and are essential for forest ecosystem well being. For example, fire is a disturbance in forests, but it is also beneficial. While disturbances kill some individuals, they also open up ecological living space for recolonization by many previously excluded species."

"Without fire, natural succession is upset. In a forest where fire has been unnaturally suppressed for many years (50 or more), fire intolerant trees grow unchecked, suppressing and outcompeting the normally dominant fire resistant trees. Overall biodiversity is reduced. As the tree diversity declines, the habitat becomes unsuitable for a large portion of the forest species. Animal species are lost, since the animals use the fire tolerant variety of tree species for food, shelter and nest sites."

Reice, Seth, Ph.D.

from a press conference with Senator Robert Torricelli, April 28, 1998,

<http://www.saveamericasforests.org/news/ScientistsStatement.htm>

FS Response: This is a press conference statement concerning the Act to Save America's Forests. The EA discloses the effects to wildlife from the project activities. We agree that there are ecological benefits from fire in the ecosystem.

Wildfire benefits Opposing View - "As a rule of thumb, timber experts say that any particular chunk of ground in the forest should be touched by intense fire every 50 to 100 years.

But the power of the fire is just the first step in forest regrowth. Weather patterns in the affected area over the next year will play a big role in how the new forests develop. A summer of drought could kill the newly released seeds and short-circuit any new growth. That could give new species of trees a chance to grow in the area. Normal

enlarge existing holes. Many of these birds in turn help the forest, eating insects which can damage trees."

Dead trees (they're still full of life!)

Schneider, Gary

2008 Macphail Woods Ecological Forestry Project

Online link not available anymore

FS Response: This article is an opinion piece discussing the values of dead snags on Prince Edward Island in eastern Canada. The EA recognizes the importance of dead and down materials and discusses the requirements and effects on them in the EA beginning on page 3-17.

Wildfire benefits Opposing View - "Species that breed exclusively in the first 30 years after fire may be difficult to maintain in the ecosystem without fire. Fire exclusion and post-fire salvage of dead trees after fire may reduce populations of these species over large geographic areas."

Wildland Fire in Ecosystems: Effects of Fire on Fauna

Smith, Jane Kapler

Frames. January 2000.

http://nps.gov/fire/download/fir_eco_wildlandfireJan2000.pdf

FS Response: This article was not available. The cited excerpt provided above explains the importance of fire in the life cycle of certain species. We agree that there are ecological benefits from fire in the ecosystem.

Wildfire benefits Opposing View - "Ecological benefits of fire:

- Promotes flowering of herbaceous species and fruit production of woody species.
- Improves nutritional quality of plants for both wild and domestic animals.
- Enhances nutrient cycling of some elements and elevates soil pH.
- Maintains required habitat conditions for fire-adapted plant and animal species.
- Results in a more heterogenous and diverse habitat--if natural fires are patchy--leaving pockets of unburned areas.

- Prohibits wildfire conditions from developing (i.e., vast accumulation of highly-flammable, dead vegetation.)”

Understanding Fire: Nature's Land Management Tool

Tanner, G.W. Ph.D., W.R. Marion Ph.D., and J.J. Mullahey Ph.D.

A Florida Cooperative Extension Service publication, July, 1991

<https://www.amazon.co.uk/Understanding-fire-management-Cooperative-Extension/dp/B0006DB61S>

FS Response: This quotation is from a pamphlet produced by the Florida Cooperative Extension Service discussing fire ecology in Florida. Fire ecology in Florida is not relevant to this project. However, local fire ecology was considered and impacts to vegetation, soils, wildlife were analyzed.

Wildfire benefits Opposing View #26 - "In retrospect, it is amazing that forest managers did not realize that dead wood was a critical habitat component for vertebrate and invertebrate wildlife and for the forest itself."

Dead Wood: from Forester's Bane to Environmental Boon

Thomas, Jack Ward Ph.D., US Forest Service Chief

Keynote address at the symposium on ecology and management of deadwood in western forests, Reno, Nevada. 1999.

http://www.fs.fed.us/psw/publications/documents/gtr-181/003_Thomas.pdf

FS Response: This speech discussed the importance of dead wood, both standing and downed. It has long been recognized that snags and downed logs have values for wildlife. The Forest Plan includes direction for snag and downed log retention. Project design features include activities to retain snags and downed wood. The analysis for wildlife species that use snags and downed logs incorporate that into the analysis.

The GTR-181 describes the evolving change in the viewpoint concerning dead wood in forest ecosystems. Thomas presents a basic overview of the importance of dead wood for forest species. He then discusses the need for the synthesis of new research and information into land management practices and policy. He goes on to present some examples where researchers and land managers have been able to synthesize scientific work and information into a form where land managers are able to implement the new science on the ground. See the EA at 3-17 for discussion of effects to snags and down wood.

Wildfire benefits Opposing View - "Wildfires have been a natural part of our environment since time began. Under the right circumstances these wildfires can be beneficial to an ecosystem."

“Wildfires consume vegetation that would otherwise become overgrown, creating ideal conditions for a catastrophic wildfire. Wildfires allow more open spaces for new and different kinds of vegetation to grow and receive sunlight. This, in turn, provides fresh nutrients and shelter for forest plants and animals. Wildfires also keep our forests healthy by consuming harmful insects and diseases.”

Are You Wildfire Aware?

Vernetti, Toni

June 07, 2005

Online link not available anymore

FS Response: This article is a generalized description of the causes and effects of wildfire in urban interface areas. It is a general comment or opinion which does not warrant a detailed response

Wildfire benefits Opposing View - "Fire is an essential, natural and necessary part of Western forest ecology. Many species of trees can only reproduce after fires occur. Wildland fires burn underbrush and return important nutrients to the soil."

Getting Burned by Logging

Voss, René, Ph.D.

The Baltimore Chronicle, July 2002

http://www.baltimorechronicle.com/firelies_jul02.shtml

FS Response: This newspaper article is an opinion piece debating the timber industry stance for harvest treatments and the environmental stance promoting fire as a natural part of the forest ecology. This is an opinion which does not warrant a detailed response.

Wildfire benefits Opposing View - “Wildfire is a natural part of most ecosystems across British Columbia. It helps to renew the forest, maintain the diversity of plant and animal life, and keep insects and disease in check. It opens up dense forest to allow the growth of shrubs and grasses, creating browse for deer, moose, elk and other animals. It releases nutrients locked in slowly decaying logs.”

“Wildfire in British Columbia”

BC Forest Facts, September 2003

http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/364421/wildfire_bc.pdf

FS Response: This article is an opinion piece discussing the natural benefits that can be

derived from a wildfire. We agree that there are ecological benefits from fire in the ecosystem. See also above responses.

Wildfire benefits Opposing View - "People are bombarded with the negative aspects of fire," Paragi said. "You hear terms like 'destroyed thousands of acres of forest,' and the thought of destruction gets embedded in the public mind. But fire is a natural part of the ecosystem and it is actually very important." "

"Fire opens up the forest canopy and allows sunlight to reach the ground, stimulating the organisms that decompose organic matter and make nutrients available to plants. Fire burns off the insulating layer of moss and duff, allowing sunlight to further warm the soil. The ash can release nutrients back into the soil and change soil chemistry, promoting plants growth."

Regeneration Following Fire Creates Fertile Habitat for Wildlife

Woodford, Riley "

Alaska Fish and Wildlife News, August 2003

http://www.adfg.alaska.gov/index.cfm?adfg=wildlifeneews.view_article&articles_id=60

FS Response: This article is an opinion piece discussing the natural benefits that can be derived from a wildfire. We agree that there are ecological benefits from fire in the ecosystem. See also above responses.

Wildfire benefits Opposing View - "Healthy ecosystems burn, and often burn by the tens of millions of acres. The spate of large wildfires we are experiencing now are not "abnormal" or an indication of "unhealthy" forest. Rather, we are seeing the natural response of a healthy forest ecosystem.

Given that wildfire was so common for thousands of years, it is not surprising that recent research shows that wildfires, particularly severe wildfires, increase biodiversity.

If anything, we probably need more wildfire, not less. With global warming we will probably get it, as vegetative communities adapt to new climatic realities."

Logging, thinning would not curtail wildfires

Wuerthner, George

The Register - Guard (Eugene Ore.), December 26, 2008

<http://wuerthner.blogspot.com/2008/12/logging-thinning-would-not-curtail.html>

FS Response: This blog is an opinion piece promoting fire as a natural part of the forest ecology and that fires are not the result of unhealthy forest conditions and lack of management.

This is an opinion which does not warrant a detailed response. We agree that there are ecological benefits from fire in the ecosystem.

Wildfire benefits Opposing View -“The Rim fire was not ecologically damaging, but rather biologically restorative. Without fire, including high-intensity fire, the biological diversity of the Sierras would not exist as we know it. In contrast to the Rim fire, the Forest Service salvage logging plans would cause real and tangible harm to the ecologically important habitats created by the fire as well as the future biological diversity of the region.” (page 9)

Nourished by Wildfire

Published by the Center for Biological Diversity and the John Muir Project, January 2014

http://www.biologicaldiversity.org/species/birds/black-backed_woodpecker/pdfs/Nourished_by_Wildfire.pdf

FS Response: Salvage harvest activity would take place on approximately 2% in the fire perimeter on Forest Service land, leaving areas for blacked backed woodpeckers to forage.

Wildfire benefits Opposing View - “Fire hysteria also serves the US Forest Service because most of its funding is tied to fire-fighting and logging. Those US Forest Service employees who vilify severe fire and say that tree harvesting prevents fires or “restores” forests after a fire are operating in an organization that is too narrowly focused on trees as commodities—witness the November 7, 2013 announcement by the Stanislaus National Forest that they plan to salvage log the Rim Fire near Yosemite.

Dozens of studies over the past two decades have shown that a severely burned forest is a living, thriving habitat that has always been a natural part of western forest ecosystems. Severely burned forests are filled with animals that feast on superabundant food, such as insects and seeds, created by the fire. Anyone with the opportunity to experience a severely burned forest like the Rim Fire is blessed with a cacophony of birdsong, the hum of insects, and a wildflower and pollinator show like nowhere else on the planet.”

Some Like It Hot: The Truth About Forest Fire

Bond, Monica L. and Hutto, Richard L.

Published by Wild Nature Institute, 2016

<http://www.wildnatureinstitute.org/forest-fire-truths.html>

FS Response: This article states “Some forest managers have begun to recommend retaining some stands of severely burned forests in their management plans. For

example, the Sierra Nevada Forest Plan Amendment in California proposes guidelines for retaining at least 10 percent of severely burned forest stands during post-fire logging operations, and actual retention rates have often been higher than that.” This project proposes to harvest on approximately 2 percent of the FS land in the fire perimeter.

Wildfire benefits Opposing View – “Forest fires, particularly those that burn at mixed and high severity (collectively called ‘severe’), have been traditionally perceived as catastrophic events, directing public attention and immense forest management budgets toward fire prevention and suppression. These fires may indeed be catastrophic when measured by losses of human lives and property. However, severe fires in wildland areas are both natural and necessary to maintain the integrity of dynamic, disturbance-adapted forest systems. We propose a change in the current paradigm—which holds that severe forest fires are always harmful—to a new one that embraces their ecological necessity.” (pg 46)

A new forest fire paradigm: The need for high-severity fires

Bond, Monica L.; Siegel, Rodney B.; Hutto, Richard L.; Saab, Victoria A.; Shunk, Stephen A. *The Wildlife Professional*. Winter 2012: 46-49.

http://scholarworks.umn.edu/cgi/viewcontent.cgi?article=1374&context=biosci_pubs&sei-redir=1&referer=http%3A%2F%2Fwww.bing.com%2Fsearch%3Fq%3Dph.d.%2BMonica%2BL.%2BBond%2B%2BRichard%2BL.%2BHutto%26qs%3Dn%26form%3DQBLH%26sp%3D-1%26pg%3Dph.d.%2Bmonica%2BL.%2Bbond%2BRichard%2BL.%2BHutto%26sc%3D0-37%26sk%3D%26cvid%3D9C81EA16DDD942E884E8FB428443E66D#search=%22ph.d.%20Monica%20L.%20Bond%20Richard%20L.%20Hutto%22

Wildfire benefits Opposing View #36 – “In May the U.S. Forest Service proposed a ["salvage" logging plan](#) to clear-cut nearly 30,000 acres of the burn, and it has begun a hazardous-tree removal project that would log an additional 16,000 acres. A bonanza for the timber industry, the salvage plan would sell 661 million board feet of timber, nearly four times the volume sold last year in all of California's national forests. The plan would waive Forest Service rules intended to protect old-growth forest. Trees more than 30 inches in diameter at the base, formerly off-limits, are now fair game.

Salvage logging is a suspect concept in the West, and litigation and public opposition have slowed these projects in the past. The Forest Service, having learned from this experience, shortened the public comment period on Rim fire salvage to just 30 days. The opportunity for citizen input closed on June 16.”

The U.S. Forest Service plan for logging after the Rim fire is seen as a "catastrophe."

By Kenneth Brower, for [National Geographic](#), July 13, 2014

<https://news.nationalgeographic.com/news/2014/07/140714-rim-fire-salvage-logging-forest-ecology-wildfire-restoration/>

FS Response: Opinion piece, no detailed response warranted.

Wildfire benefits Opposing View –“When fires burn in the forest, they burn in a mosaic of low, moderate and high intensity creating a tapestry of heterogeneity which restores and improves the forest ecosystem and promotes and enriches the native biodiversity of these areas. Although it may seem counterintuitive, when older forests burn at the highest intensity some of the best wildlife habitat in the forest is created.”

Protection of Post-Fire Habitat

Published by the John Muir Project, 2014

<http://johnmuirproject.org/forest-watch/post-fire-habitat/>

FS Response: Unable to open the link. The Forest Service agrees that fire restores and improves the forest ecosystem and promotes and enriches the native biodiversity of these areas.

Wildfire benefits Opposing View –“We all recognize Smoky the Bear and his message: Only You Can Prevent Forest Fires. Smoky’s message is very important – we don’t want to start fires in the forests.

But that doesn’t mean that all fires are bad. Many times fires are started by lightning or the Forest Service might even start fires. Those fires serve a very important purpose. Forest fire benefits extend to many plants and animals.”

Forest fire benefits wildlife

Family on Bikes, Nancy Sathre, November 19, 2012

<http://familyonbikes.org/blog/2012/11/forest-fires-benefit-wildlife/>

FS Response: Blog post. No response needed.

Wildfire benefits Opposing View –“And even though some animals may be displaced during a forest fire, the scorched earth will eventually provide an ideal new home for others -- one that is full of thicker vegetation fed by nutrient-rich soil.

That's because forest fires can create an all-you-can-eat buffet. More than 40 different kinds of insects, for example, will eat their way through fire-ravaged territory as they burrow into the wood that remains.”

How does a forest fire benefit living things?

By Laurie Dove, Published by “How Stuff Works – Science”, 2018

<https://science.howstuffworks.com/environmental/green-science/how-forest-fire-benefit-living-things-3.htm>

FS Response: This is a website that briefly summarizes fire ecology. No detailed response warranted.

Wildfire benefits Opposing View –“In the 1930’s, researchers in the southern United States argued against the negative perspective that has surrounded fire, with the belief that all fire is bad. It was realized that the devastating picture painted by huge-scale fires produced fear in the minds of the public (and in politicians and scientists alike), and that this generated detrimental results in response to any wildland fires. These researchers recognized that there are species of plants that rely upon the effects of fire to make the environment more hospitable for regeneration and growth. Fire in these environments prepares the soil for seeding by creating an open seedbed, making nutrients more available for uptake and often killing plants that are invading into the habitat and competing with native species.”

“The ecological benefits of wildland fires often outweigh their negative effects. A regular occurrence of fires can reduce the amount of fuel build-up thereby lowering the likelihood of a potentially large wildland fire. Fires often remove alien plants that compete with native species for nutrients and space, and remove undergrowth, which allows sunlight to reach the forest floor, thereby supporting the growth of native species. The ashes that remain after a fire add nutrients often locked in older vegetation to the soil for trees and other vegetation. Fires can also provide a way for controlling insect pests by killing off the older or diseased trees and leaving the younger, healthier trees. In addition to all of the above-mentioned benefits, burned trees provide habitat for nesting birds, homes for mammals and a nutrient base for new plants. When these trees decay, they return even more nutrients to the soil. Overall, fire is a catalyst for promoting biological diversity and healthy ecosystems. It fosters new plant growth and wildlife populations often expand as a result.”

Fire Ecology

Published by the Pacific Biodiversity Institute, 2009

http://pacificbio.org/initiatives/fire/fire_ecology.html

FS Response: This is a website that briefly summarizes fire ecology. No detailed response warranted.

Wildfire benefits Opposing View –“Wildfires are extremely destructive and may instill fear in homeowners. On the other hand, their distractive [nature](#) is necessary and essential for maintaining ecological balance. For starters, wildfires expose soil rich in nutrients for new plant growth. After a wildfire, [plants](#) use the rich soils and grow extremely fast. As a result, these plants provide nutrition for wildlife.”

Benefits Of Wildfires

By Harri Daniel , published by “Benefits Of everything that matters” May 4, 2011
<http://benefitof.net/benefits-of-wildfires/>

FS Response: This is an opinion which does not warrant a detailed response. This is an article that outlines the benefit of fire to wildlife and the forest ecosystem. The Forest Service does not question this statement.

Wildfire benefits Opposing View –“Herbivores and species that prefer herbaceous vegetation for cover prefer the grass/forb habitats or broad-leafed forests that often become established after a burn. Depending on the vegetation type, burning can increase or improve forage for wildlife from a few years to as long as 100 years. In some cases, the nutritional content and digestibility of plants will temporarily increase as well. In the short term, dead wildlife becomes food for scavengers, including grizzly and black bears, coyotes, bald and golden eagles, crows, and ravens. Fire-killed trees become food for millions of insect larvae and/or snags that provide perches for raptors. Snags and downed woody debris also provide important habitat for cavity nesters, reptiles, small mammals, and even large mammals such as bears.”

Wildfire and Wildlife Habitat

Yvonne Barkley, a University of Idaho Extension publication, August 10, 2010
<http://articles.extension.org/pages/23714/wildfire-and-wildlife-habitat>

FS Response: This is an article that outlines the benefit of fire to wildlife and the forest ecosystem. The Forest Service does not question this statement.

Wildfire benefits Opposing View –“Fire clears out plants and trees to make more natural resources available to the habitat. Fewer trees means more water becomes available for the remaining plants and animals that call the area their home. New grass and shrubs are food sources for a number of animals as well. Ground cover that comes back after a fire becomes a new micro-habitat. Everything is refreshed with a fire.”

Pros and Cons of Forest Fires

By Chrystal Lombardo, Published by *Vision Launch* September 14, 2015

<http://visionlaunch.com/pros-and-cons-of-forest-fires/#>

FS Response: This is an article that outlines the benefit of fire to wildlife and the forest ecosystem. The Forest Service does not question this statement.

Wildfire benefits Opposing View –“Enormous amounts of scientific research have gone into understanding natural forest fire cycles, including the reconstruction of wildfire histories and forest conditions of the past (Kaufmann). These investigations have shown that today's forests are structurally different from those present before human settlement; this leads to changes in the patterns of forest fires (Kaufmann). Wildfires had regular roles in shaping vegetation communities of forests and grasslands, and on average, they occurred more frequently and of course much more freely due to lack of human intervention (Kaufmann). Because fires were allowed to burn uncontrollably, their severity varied in different parts of the affected area and therefore formed complex landscapes (Kaufmann). This in turn had a positive effect because it changed and created a variety of forest habitats to support ecosystem biodiversity and sustainability (Kaufmann). The creation of new habitats and the restoration of previously existing ones increases species diversity and genetic diversity. Original species will return to repopulate the area, and new species will arrive to fill the niches made by the ecological/habitat change. In this sense, wildfires act as selective pressures working in favour of native plants and animals and the introduction of new beneficial species, and working against invasive, unhealthy vegetation and harmful organisms such as insects (Kaufmann). Increased biodiversity improves the resilience and sustainability of the boreal ecosystem.”

Wildfires of the Boreal Forest Ecosystem

Angela Oliver, 2014

<https://wildfiresinborealforestecosystems.weebly.com/benefits-of-forest-fires.html>

FS Response: This is an article that outlines the benefit of fire to wildlife and the forest ecosystem. The Forest Service does not question this statement.

Wildfire benefits Opposing View –“But "wildlife have a long-standing relationship with fire" in these regions, says ecosystem ecologist [Mazeika Sullivan](#) of Ohio State University, Columbus. "Fire is a natural part of these landscapes."

“For instance, some predators see the fleeing species as an opportunity for snacking. Bears, raccoons, and raptors, for instance, have been seen hunting animals trying to escape the flames. ([Read "Under Fire" in National Geographic magazine.](#))

What's more, when the flames begin, animals don't just sit there and wait to be overcome. Birds will fly away. Mammals will run. Amphibians and other small creatures will burrow into the ground, hide out in logs, or take cover under rocks. And other animals, including large ones like elk, will take refuge in streams and lakes.”

“Many species actually require fire as a part of their life history. Heat from the flames can stimulate some fungi, like morel mushrooms, to release spores. Certain plants will seed only after a blaze. Without fire, those organisms can't reproduce—and anything that depends on them will be affected.”

What Do Wild Animals Do in a Wildfire?

By Sarah Zielinski, for [National Geographic](#), July 22, 2014

<https://news.nationalgeographic.com/news/2014/07/140721-animals-wildlife-wildfires-national-forests-science/>

FS Response: This is an article that outlines the benefit of fire to wildlife and the forest ecosystem. The Forest Service does not question this statement.

Wildfire benefits Opposing View –“A disconnect exists between the science and public opinion about impacts of high-severity fire and insect epidemics, with the public mistakenly believing that these disturbances destroy wildlife habitat. This false assumption that fire and insects are destructive to wildlife is providing the underlying basis for increased logging. Yet logging—including thinning in the name of fire reduction, and salvage logging of burned trees—is actually the greatest threat to the forest ecosystem.

Forest fires, insect outbreaks, and other disturbances are natural elements of healthy, dynamic forest ecosystems in the western United States, and have been for millennia. Exciting scientific research has demonstrated that many species of plants and animals increase in abundance following high-severity forest fire and insect infestations. Research conducted by Wild Nature Institute scientists and The Institute for Bird

Populations found that California Spotted Owls--a species that was previously assumed to be harmed by high-severity fire--prefer to forage for their small-mammal prey in intensely burned forests when that habitat is available. Predatory woodpeckers are strongly dependent upon disturbances: Black-backed Woodpeckers are the most specialized of all birds to eat wood-boring beetle larvae in intensely burned forests and are rarely encountered in unburned areas, and American Three-toed Woodpeckers are far more abundant in forests with spruce beetle epidemics than other areas. In turn, beetle populations can be regulated by these predatory woodpeckers. Far from being a threat, high-severity fire and insect outbreaks actually provide great benefits to forests and many wildlife species.”

Snag Forest Habitat Protection

Published by Wild Nature Institute,

<http://www.wildnatureinstitute.org/snag-forest.html>

FS Response: This is an opinion which does not warrant a detailed response. The purpose of this project is to capture timber value in the matrix land allocations by harvesting dead, dying or damaged trees resulting from the 2017 Chetco Bar fire.

Wildfire benefits Opposing View –“Yet, despite months of raging fire through the park, in the end the flames and smoke claimed very few animals. [Surveys post-fire](#) revealed that of 40,000 – 50,000 elk in the park, only 345 were found dead, a very small percentage of the overall population. Additionally, the survey noted that 36 mule deer, 6 black bears, 12 moose, 9 bison and 1 grizzly succumbed to the 1988 fire, and while sad, it is important to note that the vast majority of large animals survived. Rodents and other small animals had the highest mortality rates due to their small size, but still the fatality numbers were still much lower than one might expect. About one hundred fish were discovered dead, but their deaths were blamed on fire retardant water contamination rather than the fire itself.”

“Animals, forests and forest fires are all part of a natural healthy cycle – and in fact many plants and animals depend on naturally occurring wildfire to flourish. For example, many pine tree require the intense heat of a forest fire to open their cones and release their seeds. No fire, no new trees. The Red Cockaded Woodpecker, the Swainson’s Warbler, many types of quail, foxes, bears, squirrels and other animals depend on fire to keep undergrowth in check. Consequently, all forest-dwelling plants and animals have co-evolved with the inevitable fires and have found ways to adapt.”

What Happens to Animals During a Forest Fire?

By Cherise Udell, published by Care2, August 26, 2013

<https://www.care2.com/greenliving/what-happens-to-animals-during-a-forest-fire.html>

FS Response: This is an opinion which does not warrant a detailed response.

Wildfire benefits Opposing View –“Stephens and colleagues (2012) examined the efficacy of fuel treatments in reducing susceptibility to uncharacteristically severe fires in seasonally dry US forests. They were overly optimistic in stating that the effects of thinning on wildlife have “few unintended consequences” with “very subtle effects or no measurable effects at all” and failed to recognize the ecological benefits of high-severity fires that are actually below historic levels.

Stephens and colleagues did not include studies documenting adverse effects of thinning on small mammal prey species for northern spotted owls (*Strix occidentalis caurina*; e.g., Meyer et al. 2005) or on rare species, such as black-backed woodpeckers (*Picoides arcticus*; Hutto 2008). Nor did they address “ecological trap” phenomena created by silvicultural activities without evolutionary precedent—a factor that can draw declining postfire specialists like olive-sided flycatchers (*Contopus cooperi*) into managed environments wherein they suffer poor nest success (Robertson and Hutto 2007).”

The Overlooked Benefits of Wildfire

By Chad Hansin Ph.D., Dominick Dellasala Ph.D. and Monoca Bond

Published on *Bioscience*, 2013

<http://www.bioone.org/doi/full/10.1525/bio.2013.63.4.21>

FS Response: This project does not propose any fuels treatments, only salvage harvest.